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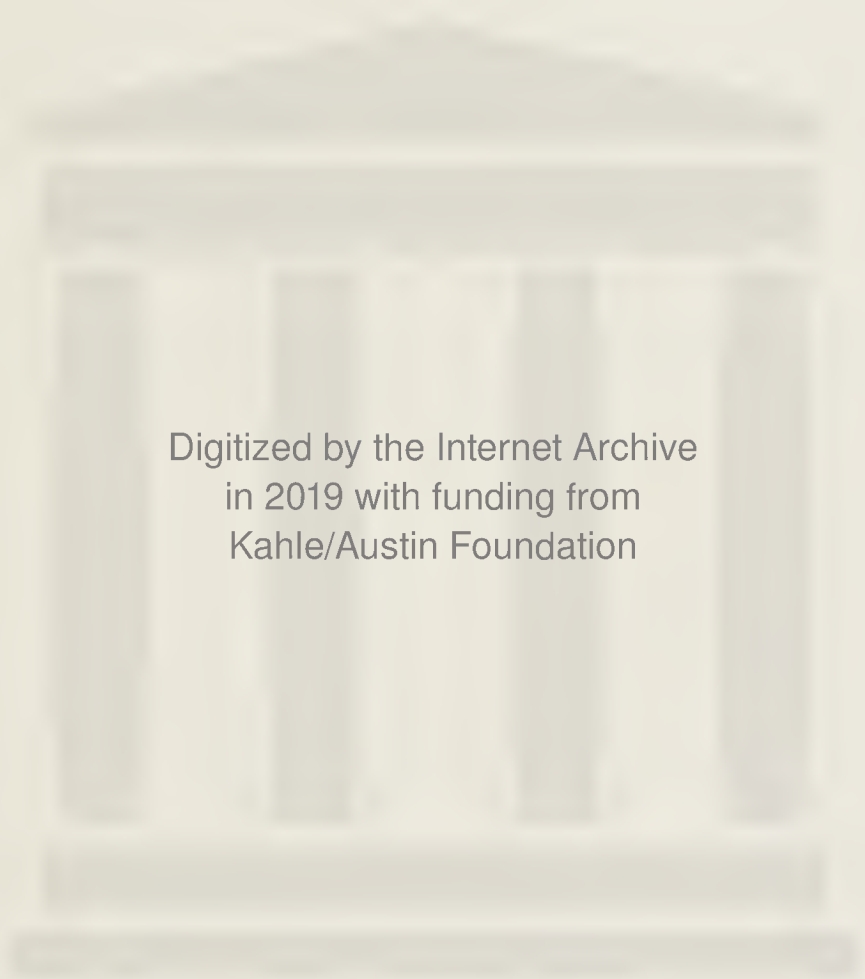
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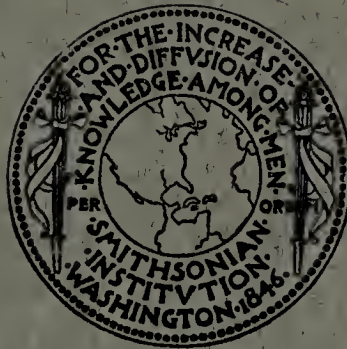
W. E. Taylor

Sixty-eighth Annual Report

of the

BUREAU OF AMERICAN ETHNOLOGY

1950-1951



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SMITHSONIAN INSTITUTION

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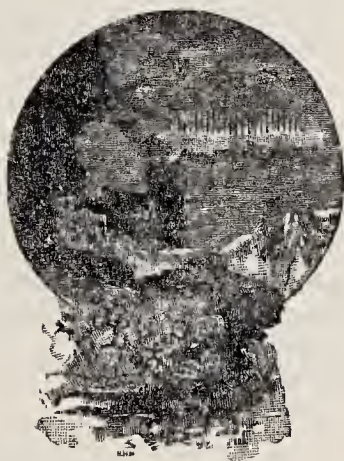
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SMITHSONIAN INSTITUTION
RIVER BANK SURVEYS
MISSOURI VALLEY PROJECT

SIXTY-EIGHTH
ANNUAL REPORT OF THE
BUREAU OF
AMERICAN ETHNOLOGY

TO THE SECRETARY OF THE
SMITHSONIAN INSTITUTION

1950-1951



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1952

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June 30, 1951

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Associate Director.—FRANK H. H. ROBERTS, Jr.

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SMITHSONIAN INSTITUTION
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February 1, 1952

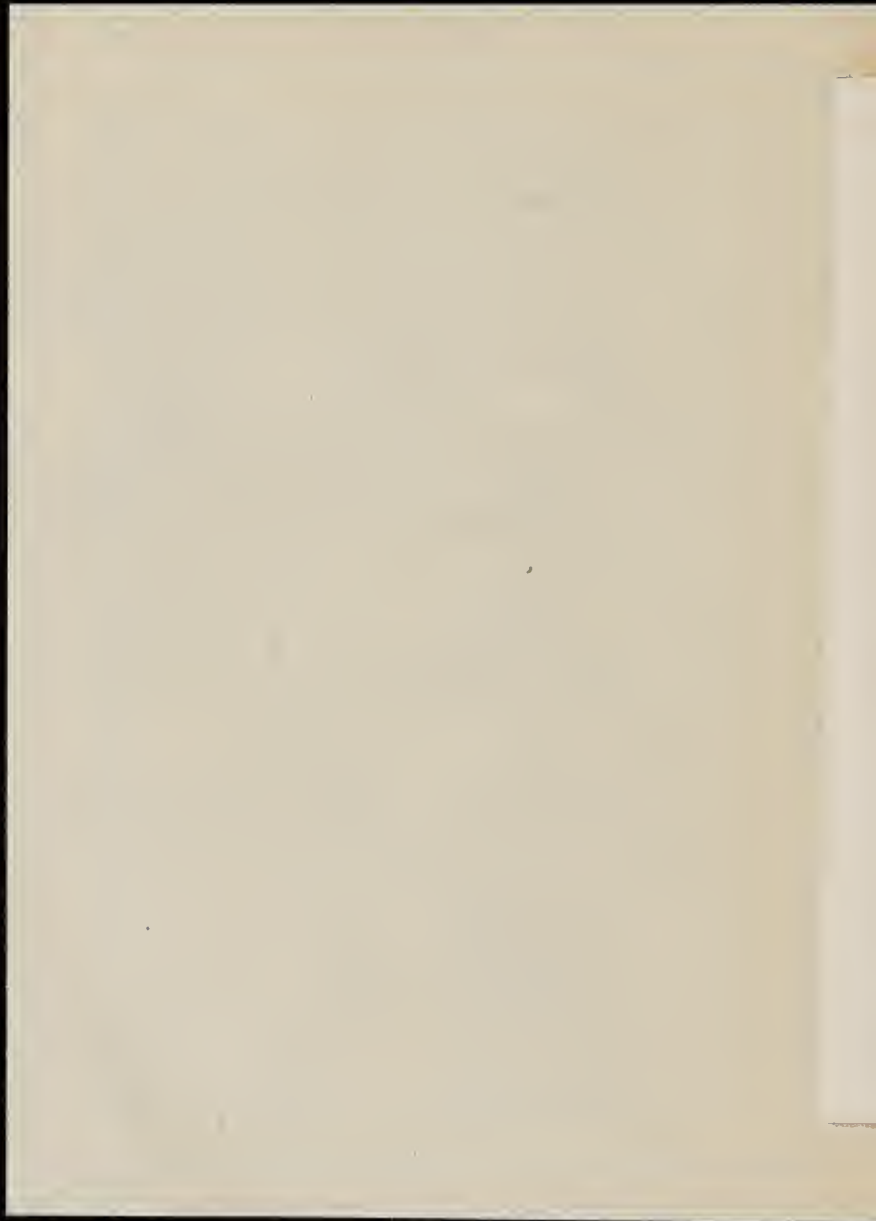
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SIXTY-EIGHTH ANNUAL REPORT
OF THE
BUREAU OF AMERICAN ETHNOLOGY

M. W. STIRLING, *Director*

SIR: I have the honor to submit the following report on the field researches, office work, and other operations of the Bureau of American Ethnology during the fiscal year ended June 30, 1951, conducted in accordance with the Act of Congress of April 10, 1928, as amended August 22, 1949, which provides for continuing "independently or in cooperation anthropological researches among the American Indians and the natives of lands under the jurisdiction or protection of the United States and the excavation and preservation of archeologic remains."

SYSTEMATIC RESEARCHES

Dr. M. W. Stirling, Director of the Bureau, left Washington early in January to continue the program of archeological work in Panamá inaugurated in 1948 in cooperation with the National Geographic Society. En route, he made stops of several days each in México, Guatemala, El Salvador, and Costa Rica to study and photograph archeological collections in those countries. In Panamá the primary objective was an archeological reconnaissance on the relatively unexplored Atlantic coast of Panamá lying between the Canal Zone and the Chiriquí lagoon. It was here in 1502 that Columbus attempted to establish the first European colony on the American mainland. Three river systems in this region were explored—the Río Salud, Río Indio, and Río Coclé del Norte. The latter is the largest river on the Panamá north coast. Columbus found this region inhabited by Indians who wore gold ornaments and who did not live in villages but in single houses separated from one another by considerable distances. Dr. Stirling's archeological work confirmed this observation. The archeological remains consisted primarily of pottery and stone objects removed from the refuse deposits where the houses had stood. Near the coast the pottery was simple in style, unpainted, and with a limited variety of forms. Near the headwaters of the rivers the pottery became more elaborate as a result of influences from the high culture centers that existed in pre-Columbian times on the Pacific side of the divide. On concluding this survey, in the latter part of March, the expedition established headquarters at La Pintada in the Pacific drainage opposite the headwaters of the Coclé del Norte, where additional excavations were undertaken with the intention of estab-

lishing the relation between the prehistoric cultures of the two regions. Dr. Robert Rands accompanied Dr. Stirling in the field as archeological assistant.

Dr. Frank H. H. Roberts, Jr., Associate Director of the Bureau and Director of the River Basin Surveys, devoted most of his time during the year to the management and direction of the River Basin Surveys. In October he went to Lincoln, Nebr., to inspect the Missouri Basin headquarters. Accompanied by Paul L. Cooper, field director, he then proceeded to the Fort Randall Reservoir area near Chamberlain, S. Dak., and visited a number of archeological sites that were being tested by one of the field parties. From Chamberlain he went to Pierre, S. Dak., and inspected the investigations being carried on in the area of the Oahe Dam. Dr. Roberts also went to several other sites that will be flooded by the Oahe Reservoir and discussed with Mr. Cooper plans for excavation projects at those locations when field work got under way in the spring months. After returning to the headquarters at Lincoln, Dr. Roberts went to Colorado where early in November he spent two days at the Lindenmeier site seeking charcoal that could be used for carbon-14 dating. He also spent two days testing a rock shelter near Livermore, which had been reported to contain materials belonging to the Folsom complex. Dr. Roberts found considerable evidence of occupancy of the shelter by recent Indians but saw nothing to indicate the older horizon. In April he went to Clarksville, Va., where excavations were under way in sites that will be flooded by the Buggs Island Reservoir. In May he went to Evanston, Ill., to attend the annual meeting of the Society for American Archaeology, of which he was President, and then proceeded to Lincoln, Nebr., where he assisted in the preparation of plans for the summer field season in the Missouri Basin. From Lincoln he went to Oklahoma and spent several days visiting sites in the Tenkiller Ferry Reservoir and observing the excavations that were being made by a River Basin Surveys' party near Tahlequah.

At the beginning of the fiscal year Dr. Henry B. Collins, anthropologist, left for a second season of field work on Cornwallis Island in the Canadian Arctic. As in the two preceding years the work was conducted under the joint auspices of the Smithsonian Institution and the National Museum of Canada. Dr. Collins and his assistant, Walter E. Taylor, anthropology student at the University of Toronto, were flown by the Royal Canadian Air Force from Montreal to the Resolute Bay weather station on Cornwallis Island, stopping en route at Churchill on Hudson Bay. The excavations yielded a large collection of the Thule culture material, most of it from in and around an unusually large stone and whalebone house at the site designated as M 1, a mile from the weather station. Just to the rear of this house was a small and inconspicuous house ruin, indicated only by a shal-

low depression in the ground, which turned out to be the oldest Thule structure thus far found in the central or eastern Arctic. The artifacts from this house were identical with those from the earliest Thule sites in Alaska. The house had evidently been occupied very briefly, for perhaps only one or two years, by some of the first Thule migrants from Alaska, who in all likelihood had then continued on their way to northwest Greenland. A similar shallow depression nearby yielded Dorset objects, the first indication that this early but little-known Eskimo culture had reached Cornwallis Island. Three culture stages are thus represented at Resolute—Dorset, early Thule, and developed Thule. The first two were probably represented by only a few families who lived there for very short periods. The last stage was of much longer duration, probably a century or more, during which time the population was probably to be numbered in the hundreds. In June 1951 Mr. Taylor returned to Resolute to complete some of the excavations that had to be left unfinished the preceding August.

Dr. Collins was reelected to the board of governors of the Arctic Institute for a 3-year term, and also for a 1-year term as treasurer of the organization. He continued to serve as chairman of the directing committee that planned and supervised the bibliography and roster projects on which the Arctic Institute has been engaged for the past four years under contract with the Office of Naval Research. The Roster of Arctic Specialists, containing biographical data on American and Canadian citizens having expert knowledge of the Arctic regions, was completed and turned over to the agencies that had sponsored and financed the work—U. S. Departments of the Army, Navy, Air Force, and Defense Research Board of Canada. The first five volumes of the Arctic Bibliography were also completed and delivered to the Government Printing Office through the Department of the Army, which had contributed additional funds for its publication. Prepared under the direction of Miss Marie Tremaine with a staff including expert bibliographers, translators, and scientists working at the Library of Congress and other libraries in the United States and Canada, the Arctic Bibliography is one of the most comprehensive regional bibliographies ever assembled and should be a useful research tool for scientists and others interested in the North.

At the beginning of the fiscal year, Dr. John P. Harrington was on the Crow Indian Reservation in southern Montana conducting linguistic studies. Dr. Harrington found in connection with his studies that the word Missouri, formerly thought to mean "large canoe" or "wooden canoe," means simply "canoe" and, as applied since aboriginal times to the Missouri River, means by implication the navigated river. Dr. Harrington also obtained detailed information concerning the Mandan coracle or bull boat from Crowsheart, an Indian 94 years of age. An article was completed on this subject. On December 19,

Dr. Harrington returned to Washington, D. C., and spent the time until March 9 writing reports on his field work. On this date he left for México in order to resume his studies on the Maya language. At the end of the fiscal year he was in Mexico City continuing this work.

Commencing July 1, Dr. William N. Fenton, having completed an assignment for the Indian Service at Taos Pueblo, conducted a survey of manuscripts relating to the ethnohistory of eastern Indians in the Henry E. Huntington Library at San Marino, Calif. The latter research, carried out with the aid of grants from the research funds of the American Philosophical Society, was published in the Proceedings of the American Philosophical Society, vol. 95, No. 3.

Factions are a peculiar feature of American Indian political organization that has yet to be worked out for the country as a whole. Some ideas about political structure and methods of field work, which Dr. Fenton developed over a long period of field and library study among the Six Nations, were this past year transferred to the study of Indian self-government, which is riddled with factional disputes, in three divergent tribal cultures—Taos, Klamath, and Blackfeet. Each field situation was unique and required adjusting techniques, but the main principles hold. Field work was completed at Klamath Indian Agency in August, and the situation at Blackfeet Agency in Montana was explored during September. On returning to Washington late in September, at the request of the Indian Bureau Dr. Fenton drafted a comprehensive plan for the study of the Blackfeet problem by a team of social-science specialists who would be drawn from several disciplines including anthropology.

RIVER BASIN SURVEYS

(Report prepared by FRANK H. H. ROBERTS, Jr.)

Instituted in the fall of 1945 as a unit of the Bureau of American Ethnology, the River Basin Surveys were organized to carry into effect a memorandum of understanding between the National Park Service and the Smithsonian Institution. The memorandum pertains to the salvage of archeological and paleontological remains that would otherwise be lost as a result of numerous projects for flood control and irrigation, hydroelectric installations, and navigation improvements in the river basins of the United States. The field work was started in July 1946 and has continued since that date. During the entire period of operations the investigations have been conducted as an interagency program with full cooperation on the part of the Smithsonian Institution, the National Park Service, and the Bureau of Reclamation of the Interior Department, and the Corps of Engineers of the Department of the Army. In addition, numerous non-Federal institutions scattered throughout the various States have

aided in the work. The program in the last fiscal year was financed by a transfer of \$174,375 to the Smithsonian Institution by the National Park Service. Those funds were derived in part from the National Park Service and in part from the Bureau of Reclamation. The money from the Bureau of Reclamation was for use in the Missouri Basin, while that from the National Park Service was for use in all other areas throughout the United States. Because the appropriations for the previous year became available so late in the field season, a substantial carry-over (\$135,574) increased the 1951 funds so that a much larger series of investigations was possible than would otherwise have been the case.

Activities during the year consisted of reconnaissance or surveys for the purpose of locating archeological sites or paleontological deposits that will be flooded or otherwise destroyed by construction work and in the excavation of sites located by previous surveys. In all, 45 reservoir basins located in 13 States and scattered over 8 river basins were visited by survey parties. In addition one lock project and four canal areas were examined. Excavations were completed or were under way at the end of the fiscal year in 20 reservoir areas in 10 States. During the course of the year there were 26 excavating parties in the field. Eight of the excavation projects were in areas where digging was done in previous years, but the remainder were new undertakings. When the fiscal year closed, the total of the reservoir areas where surveys had been made or excavations carried on since the beginning of actual field work in July 1946 was 225 located in 25 States. During the course of the work 2,894 archeological sites have been located and recorded, and of that number 545 have been recommended for excavation or additional testing. Preliminary appraisal reports were completed for all the reservoirs surveyed, and 14 reports were mimeographed for limited distribution to the cooperating agencies. This makes a total of 134 such reports issued since the start of the program. In some cases a series of reservoirs is included in a single report covering a subbasin, and for that reason the total number of reports is less than that of the reservoirs. The excavations made during the fiscal year brought the total for areas where such work has been done to 33. The results of some of that work have been published as technical reports in various scientific journals, and one Bulletin of the Bureau of American Ethnology containing eight such papers is now in press. That Bulletin inaugurates a new series, to be called "River Basin Surveys Papers" and designed as an outlet for the reports resulting from the interagency archeological salvage program. Paleontological surveys have been made in 115 reservoir areas, 70 being those where archeological work has also been done. The remaining 45 in due course will be investigated by

archeological parties. The over-all total of reservoirs visited, including those where archeological work still needs to be done, is 270.

The reservoirs investigated for archeological remains as of June 30, 1951, have the following distribution by States: California, 20; Colorado, 24; Georgia, 4; Idaho, 11; Illinois, 2; Iowa, 3; Kansas, 7; Kentucky, 1; Louisiana, 1; Minnesota, 1; Montana, 14; Nebraska, 27; New Mexico, 1; North Dakota, 13; Ohio, 2; Oklahoma, 7; Oregon, 26; Pennsylvania, 2; South Dakota, 9; Tennessee, 1; Texas, 15; Virginia, 2; Washington, 11; West Virginia, 2; Wyoming, 19. Excavations since the start of the program have been made in: California, 5; Colorado, 1; Georgia, 1; Kansas, 1; Montana, 1; Nebraska, 1; New Mexico, 1; North Dakota, 4; Oklahoma, 2; Oregon, 3; South Dakota, 5; Texas, 7; Virginia, 1; Washington, 8; Wyoming, 3.

The River Basin Surveys received extensive cooperation during the year from the National Park Service, the Bureau of Reclamation, the Corps of Engineers, and numerous State and local institutions. Guides and transportation were furnished staff men in the field at a number of projects, while at others office and laboratory space was provided. In several cases labor and mechanical equipment were contributed by the construction agency. Had it not been for the assistance provided in that way, it would not have been possible for the River Basin Surveys' men to accomplish as much as they did. As in past years, the National Park Service served as the liaison between the various agencies and provided the Smithsonian Institution with the necessary information concerning the locations of the proposed dams and reservoirs and also their priorities. In addition, the National Park Service carried the responsibility for budgeting the costs of the program and for procuring the funds.

General supervision and direction of the work in California, Georgia, Kentucky, Oklahoma, Pennsylvania, and Virginia were from the main office in Washington. The program in the Columbia Basin was directed from a field headquarters and laboratory at Eugene, Oreg.; that in the Missouri Basin was under the supervision of a field office and laboratory at Lincoln, Nebr.; and that in Texas was under the field office at Austin. All the materials collected by the survey and excavation parties in those three areas were processed at the field laboratories. In addition, the collections made in Georgia were processed at a laboratory at Athens.

Washington office.—The main headquarters of the River Basin Surveys continued under the direction of Dr. Frank H. H. Roberts, Jr. Joseph R. Caldwell, Carl F. Miller, and Ralph S. Solecki, archeologists, were based on that office, although Caldwell spent the entire year in Georgia, and Solecki took leave of absence to join an expedition going to the Near East. Dr. Theodore E. White, paleontologist, di-

vided his time between the Washington office, the Missouri Basin, and the Texas area.

Mr. Caldwell spent the early months of the fiscal year working on his report on the results of the excavations completed during the previous year at the Allatoona Reservoir. In November he proceeded to the Buford Reservoir area on the Chattahoochee River northeast of Atlanta where he carried on a survey until April 6. In the latter part of April Mr. Caldwell made an investigation at the site of Fort Charlotte in McCormick County, S. C., to determine what work might be necessary to obtain full information about it before it is flooded by the waters of the Clark Hill Reservoir. From Fort Charlotte Mr. Caldwell returned to his field base at Athens where he prepared a manuscript "The Booger Bottom Mound: A Forsyth Period Site in Hall County, Georgia."

At the beginning of the year, Carl F. Miller was carrying on excavations at a site on the east bank of the Roanoke River near Clarksville, Va. He continued operations there until August 4, when he returned to Washington. During the months spent in the office, Mr. Miller worked on his section of the report on the excavations at the Allatoona Reservoir in Georgia. On February 28 he returned to Clarksville and resumed investigations in the Buggs Island Reservoir area. Those operations continued until June 20, when he proceeded to Bassett, Va., and made a survey at the Philpott Reservoir on the Smith River. He returned to Washington on June 30. During such times as the Director was absent from the Washington office, Mr. Miller served as Acting Director of the River Basin Surveys.

Ralph S. Solecki devoted the early months of the year to the completion of reports on work done previously. In October he made a brief investigation of the area at Morgantown, W. Va., where a new navigation lock was under construction. From there he proceeded to the Conemaugh Reservoir on the Conemaugh River in western Pennsylvania, where he made a reconnaissance of the area that will be flooded. From the Conemaugh project he proceeded to the East Branch Reservoir basin on the Clarion River, also in Pennsylvania. After completing the survey of that area, he returned to Washington and completed his report on the field investigations.

Dr. Theodore E. White spent the winter and early spring months in Washington studying the materials he had collected during the summer field season and in the preparation of a manuscript "Preliminary Analysis of the Fossil Vertebrates of the Canyon Ferry Reservoir Area." In April he went to Texas where he collected fossils from the Lavon Reservoir on the East Fork of the Trinity River in Tarrant County and from the Garza-Little Elm Reservoir on the Elm Fork of the same river in Denton County. In June Dr. White proceeded from

Texas to Lincoln, Nebr., and resumed his activities in the Missouri Basin.

California.—At the beginning of the fiscal year a party under the direction of Franklin Fenenga was excavating a site in the Terminus Reservoir area on the Kaweah River, in Tulare County. That work was continued until August 1, and upon its completion detailed information had been obtained about a small village consisting of 14 houses and 3 distinct milling places. The site was important because it provided an opportunity to study the remains left by a group of people who occupied the region in historic times and concerning whom there is an extraordinarily complete ethnographic record. The lower end of the Kaweah Canyon was formerly occupied by a small band of the Yokut Indians known as the Wukchumne or Wickehamni. Correlations of the data from both the ethnological and archeological sources of information will make it possible to prepare an archeological report containing an almost unique amount of information on the function and significance of the artifacts and the various features of the site. Many items of the material culture previously known only through tradition are now represented by actual objects recovered during the archeological researches.

Upon the completion of the digging at the Terminus Reservoir, Mr. Fenenga moved his party to the Folsom Reservoir located on the American River, in Eldorado County, where excavations were carried on from August 3 to September 16. About 75 percent of the site was investigated. The returns were small in that only a single burial and 214 artifacts were found. The burial was that of a child about 12 years old and had no accompanying offerings. The artifacts consist for the most part of stone and, as most of them are unspecialized forms making functional identifications or comparisons with objects from other sites difficult, they are not particularly significant. A small series of arrow points, about half of which were made from a native opal, will be useful in the matter of correlation with other sites, but at present there is so little material available for study from that particular region that conclusions are not warranted. Until more data are obtained, it will not be possible to give a reasonably complete picture of the material culture of the people who occupied the site.

Two field parties excavated at the Cachuma Reservoir on the Santa Ynez River, in Santa Barbara County. One of them, under Albert D. Mohr, worked from August 1 to September 12, while the other, under Martin Baumhoff, worked from April 3 until May 18. The first party excavated in a site that contained evidence of three cultures previously described by David Banks Rogers. They are the Oak Grove, Hunting, and "Chumash." The evidence obtained there substantiated the re-

ported sequence for the Santa Barbara area. It also indicated that two phases each of the last two periods might be defined as the result of further work. The same party also did some testing in another site which apparently represents a single late period that extended into early historic times.

The party under Mr. Baumhoff concentrated its efforts at the second site where Mr. Mohr worked and obtained considerable additional information from it. Preliminary study of the artifacts indicates that the occupation is attributable to the Canaliño. There is evidence of trading activities in the form of tubular beads from the San Joaquin Valley and potsherds similar to the pottery made by the Yokuts of that region and the western Paiutes. No house remains were found, but there were scattered piles of stones that appear to have been intentional rather than accidental, and in one case there was a pear-shaped pit 12 feet 8 inches long, 6 feet 3 inches wide, and 1 foot 3 inches in depth, which had been lined with slabs of shale and was filled with rocks of all sizes. The function of the pit has not been determined. It was at first thought that the feature may have been a sweat house, but the nature of the shale lining was such that it probably would not have withstood the heating necessary for sweat-house purposes. Additional work is needed at the Cachuma Reservoir in order to gain a better understanding of the aboriginal history of the area.

Columbia Basin.—Work in the Columbia Basin was continued under the supervision of the field headquarters at Eugene, Oreg., where laboratory and office space were provided by the University of Oregon. Joel L. Shiner served as acting field director throughout the year. Activities in that area consisted of a survey of six reservoir projects and excavations in four areas where preliminary reconnaissance work had already been completed. The John Day Reservoir basin on the John Day River, in Oregon, was examined by Robert Farrell and Stuart Peck during the first two weeks in July. The party found 88 sites and recommended testing or more extended excavations for 8 of them. From the John Day Reservoir, Peck and Farrell proceeded to the Hells Canyon Reservoir on the Snake River, in Oregon-Idaho, where they found 22 sites, of which 4 were recommended for investigation. The latter survey was completed the middle of August. During July George L. Coale and Octavio Romano surveyed the area to be flooded by the Albeni Falls Reservoir on the Pend Oreille River, in northern Idaho. They found 13 sites and recommended the testing of 5. Construction work on the dam has progressed to such an extent that the indicated work may not be possible at that location. From the Albeni Falls area, Coale and Romano proceeded to the Katka and Libby Reservoir projects on the Kootenai River, in Idaho and Montana, where they made a preliminary reconnaissance. The Katka Dam is located in Idaho, but the reservoir will extend upstream into

Montana. The survey of the Katka area located and recorded 14 sites, of which one was recommended for excavation. Three others, however, were found to be worthy of testing. The Libby area contains 11 archeological sites, and because so little is known of the archeology of the Kootenai Indians, 6 of the 11 were recommended for further study. Extensive excavation would not be required at any of them, however. John M. Campbell spent July and August making a survey of the Priest Rapids Reservoir basin. The Priest Rapids Dam is to be built in the Columbia River just below the rapids and will create a pool area 56 miles long. The district to be flooded is an important one from the standpoint of the aboriginal occupation of the area, and 74 sites were found there. Of that number, 29 are considered to be of high archeological significance. The sites consist of those with well-preserved house pits, the remains of open camps, cave shelters, burial grounds, and various groups of pictographs. The region is one that was occupied by several different Indian groups, and knowledge from it should have an important bearing on a large section of the Plateau Culture area.

At the start of the fiscal year a party under the direction of Douglas Osborne, consulting archeologist, was continuing excavations at a site on the Washington side of the Columbia River near Mottinger in the McNary Reservoir basin. The site was that of a postcontact village and probably was the location of that visited by Robert Stuart in 1812. During the course of the digging three house pits and one mat lodge were uncovered, and three additional house pits were tested. The house pits were circular, and if the identification of the village is correct it would indicate that the circular earth lodge was in use in that area at a later date than most anthropologists have believed. The artifacts obtained were not numerous, which is a condition found at most of the places worked in the McNary basin. In addition to aboriginal stone and bone implements and shell ornaments, a variety of European goods was obtained. Several of the house pits gave evidence of several separate occupations, which may indicate that the village was not lived in continuously but was revisited from time to time, perhaps by the same group of people. The remains of the long narrow mat house, which was a popular form of multifamily dwelling during the historical period in that area, agree closely with the descriptions of such houses given by the Umatilla Indians to ethnological investigators in previous years. One complete burial was recovered at that location. Late in July Mr. Osborne transferred his party to a site near Cold Springs on the Oregon side of the river where he dug four house pits in the remains of a small village. During periods of high water the site appears to be located on an island, as a portion of the river flows through an old channel and separates it from high ground to the south. The village was situated on the side nearest

the main channel and consisted of two distinct groups of houses. The largest group was centered about 500 feet downstream from the smaller one. An almost identical condition had previously been noted at another site where work was done during the summer of 1949, but thus far no explanation for such a division has been found. The pits at this particular location were also circular in form and indicated a single occupation. The lack of well-developed midden or refuse areas implies that the village must have been short-lived or that particular care was taken to throw refuse into or near the river. Trade goods were scarce at this site, which would seem to indicate that it should be dated as slightly earlier than the time of the first contact with the Whites or just prior to 1800. The Lewis and Clark map shows the "island" but does not indicate the presence of a village or at least the existence of houses. It would appear that the village had been abandoned and had fallen into ruin before 1805. The most important contribution from the excavations at these sites is the verification of data secured at other locations in the McNary, particularly with respect to the size and shape of the former houses and their artifact associations; also, it was indicated that, while fishing was the primary source of subsistence, hunting actually played a larger part in the economy than previously supposed. Mr. Osborne also completed the excavation of a house pit at a site 1 mile downstream where work was done the previous summer, and in addition located and removed 17 burials from Sheep Island in the middle of the river about equidistant from the other three sites. Some work had been done previously at that location by Thomas R. Garth, who was then with the National Park Service. Osborne, who was under a temporary appointment as consulting archeologist, completed his investigations the end of August and returned to his regular duties at the Washington State Museum.

Richard D. Daugherty and his party continued the excavations started near the end of the previous fiscal year at the O'Sullivan Reservoir near Ephrata, Wash., and completed the investigations on September 2. They spent the summer season at a small village site close to a larger one where Daugherty did some work in the summer of 1948. During the current year two large circular house pits were dug, and the remains of a rectangular mat dwelling were uncovered. A series of cairns that had formerly contained burials was also studied. The graves had been systematically rifled by local collectors, however, and little could be learned other than that the piles of stone had covered the remains of cremations. Information pertaining to the house types agreed with that from the previous digging, and from that data it will be possible to draw a number of conclusions about the dwellings of the area. Not a single item was found suggesting White contact, but the similarity of the artifacts to those from other sites in the region where there was association with contact material suggests that

the occupancy was not long prior to the time the first white men reached the area. In general the artifacts consist of projectile points, various types of scrapers, knives, drills, hammerstones, sinkers, pendants, grinding stones and pestles, stone pipes, bone awls and points, bone flaking tools, gaming pieces, and beads. While carrying on his excavations, Daugherty also tested a site in the Lind Coulee where materials attributable to the Paleo-Indian occur. The site is outside the reservoir basin but is along the course of lateral and distribution-system canals, and as Lind Coulee is to be used as a wasteway for them the archeological remains will ultimately be destroyed.

A party under the direction of Samuel J. Tobin was excavating in a large rock shelter in the Equalizing Reservoir basin southwest of the town of Grand Coulee, Wash., at the start of the fiscal year. The work was carried on through July. Evidence obtained there was that the shelter was not a regular dwelling place but rather a spot where small parties probably camped from time to time. Three distinct levels of occupation were found, but apparently no great length of time intervened between each level, and the materials suggest that the same cultural group was involved throughout. The chief significance of the shelter is that a considerable amount of dry material such as is rarely found in open sites was obtained. Included in it are cordage, fragments of bow staves, arrow or spear shafts, textile fragments, matting, and pieces of basketry. Nonperishable artifacts are projectile points, bone implements and beads, and shell beads. The rear wall of the shelter was decorated with pictographs, some made with white paint and others in red. Analysis of the dry materials should throw considerable light on that phase of the material culture of the people in the area. Present indications are that the shelter may well have been occupied by either the Nespelem or their eastern neighbors the Sanpoil. Although contact objects were lacking below the surface, it is difficult to assign either a historic or a pre-Columbian age to the site.

The beginning of the fiscal year found a party under George A. Cheney digging in village remains along the Columbia River in the basin to be flooded by the Chief Joseph Reservoir. The work continued through July and August and into early September. In August Tobin's party was shifted to that project to assist in the investigations. The work in September was a cooperative effort, the Washington State Museum providing the necessary labor. At the end of the season 42 house pits located in 7 sites had been dug and accompanying trash mounds examined. Good information was obtained concerning the house type, and indications are that there was no particular village pattern. The structures do not seem to have been grouped, but at all the sites were strung along a terrace above the river in sheltered areas well back from the water. The artifacts

recovered consisted in the main of stone projectile points, blades, scrapers, hammers, pestles, pipes, choppers, and bowl fragments. The evidence in general appears to show that a single cultural level was represented at all the sites investigated. The area is one, however, where the river has done considerable scouring and shifting, and it is possible that older materials may have been destroyed. Though many of the data from the Chief Joseph Reservoir supplement those reported by earlier workers for the Upper Columbia-Grand Coulee Reservoir, there are some marked differences in certain artifact categories. Considerable light will be thrown on the archeology of that portion of the Columbia Basin when studies on the materials from the Chief Joseph Reservoir are completed.

On April 2 Joel L. Shiner started excavations at a site in the McNary Reservoir where a cultural layer had been discovered underneath a thick stratum of wind-deposited volcanic ash. The site, which was reported to the River Basin Surveys in January by Thomas R. Garth, represented a single occupation by a group of Indians having a simple culture and, except for the projectile points, very crude tools. Some 100 artifacts, including hammerstones and choppers in addition to the points, were found there. Large numbers of animal bones, many of them burned, and mussel shells were present in the midden. There were no indications, however, of any type of habitation. The culture probably represents a fairly early horizon in the Columbia Basin, but its proper place in the sequence for the area cannot be determined definitely until the volcanic ash is correlated with one of the known eruptions in the region or the burned bones have been dated by the carbon-14 method. Typologically the artifacts appear to be of respectable age.

At the end of April Mr. Shiner moved his party to the site of a former fishing village at the mouth of the Walla Walla River and carried on excavations there until the middle of May. Most of the digging was done in a midden deposit adjacent to the house remains, and a good series of artifacts was obtained. That is one of the few locations where enough material was found to make possible a satisfactory statistical study of the types of artifacts. The village apparently was occupied just prior to and during the first coming of the white man. A large number of burials had been present at one time, but the locality had been so thoroughly dug by local collectors that only scattered bones were found by Shiner's party.

During the year seven preliminary reports were completed and mimeographed at the Eugene office. Specimens from the various surveys were processed and cataloged and the photographs taken by the various parties were cataloged and filed. Because of the situation with respect to funds for the following fiscal year, it was necessary to close the Eugene office on June 30, 1951.

Georgia.—Field work in Georgia was carried on from a base of operations furnished by the University of Georgia at Athens. The main investigations during the year were of a survey nature. From November 14 to April 6 a reconnaissance was made of the area that will be inundated by the proposed Buford Reservoir on the Chattahoochee River. From April 23 to 28 a brief reconnaissance was made in the Clark Hill Reservoir, on the Savannah River, for the purpose of locating the remains of Fort Charlotte.

The Buford Reservoir basin occupies a large intermediate section of north-Georgia terrain lying between the Allatoona Reservoir area on the Etowah River and the north-Oconee drainage. The region is one that is virtually unknown archeologically, and it should contain significant data as far as a proper understanding of cultural developments in that part of Georgia is concerned. The preliminary survey located 46 sites in the area to be flooded. Included in the group are 29 that appear to represent a rather early prepottery period. There is some evidence that this group of sites may be somewhat older than the Stallings Island Prepottery Culture. A larger proportion of sites belong to the Woodstock period than was found to be the case during the investigations at the Allatoona Reservoir. The larger number of early sites indicates either that there was a sizable population in the district or that it was occupied over a long span of time. Extensive investigation of a number of the sites should give an answer in that respect. Two large previously unrecorded mounds were also noted, and some test digging was done in them. One gave evidence of having been erected over a small natural knoll, and the outlines of a small square house with a bench, bed, or throne at one end were found on its summit. The mound appears to represent a rather late and previously unknown complex which probably is pre-Lamar in age. The other mound apparently is one of the oldest artificial structures thus far found in Georgia. It differs from previously recognized types of eastern mounds in that it was not accretional and probably was not intended for burial purposes. Neither does it seem to have been a temple platform or domiciliary mound. Evidence obtained during the course of testing it and adjacent areas suggests that it probably belongs in the Forsyth Period, which falls into the general category known as the Burial Mound I Period. In many ways the mound suggests similarities to the well-known Swift Creek Mound. One postulation as to its function is that it may have been erected for ceremonial purposes even though there are no traces of a structure on its summit. A simple earthen platform without a structure would be the logical beginning in the development of the eastern temple-mound complex.

In addition to the pre-Columbian sites, the survey found a number attributable to the historic Cherokee. The latter are located for the

most part along the course of the old Federal Road, which passed through the Cherokee country to the Tennessee settlements. A brief study was made of the Vann House which was built between 1805 and 1813 to serve as an inn for people traveling along the Federal Road and stands on a high knoll overlooking the Chattahoochee River about 1½ miles from the present town of Oscarville. It is one of the few Indian country taverns still standing. In its present form the structure shows several periods of enlargement, but the old original portion is readily discernible, and careful study of it should produce interesting data on the nature of the taverns of the period when built.

The search for the remains of Fort Charlotte, in the Clark Hill Reservoir area, showed that it was located on the South Carolina side of the Savannah River, but inasmuch as it will be inundated by the Clark Hill Reservoir, the dam for which is being built in Georgia, investigation of the site is considered to be a part of the Georgia project. Fort Charlotte, built in 1765 as one of the Colonial defenses against the Cherokee Indians, was seized on July 12, 1775, by South Carolina troops—one of the first overt acts of defiance by the rebellious Colonies against the British Government. It continued to be occupied by Colonial troops until the close of the Revolutionary War. Because of the lack of accurate information about the actual physical character of the fort and the fact that certain phases of its history correlate with Indian activities in that area, it is hoped that all remaining evidence pertaining to it can be retrieved from the site before it is inundated.

Kentucky.—During the period April 16 to May 18 Douglas W. Schwartz, field assistant, made a reconnaissance and carried on limited test excavations in the basin to be flooded by the proposed Celina Reservoir on the Cumberland River, in southern Kentucky. He located 24 archeological sites, representing a number of cultural periods; further work in the area probably would make it possible to establish a sequence for them. Excavations in six major sites have been recommended, but inasmuch as all of them are above the pool line there is no immediate urgency for their investigation. Their location is such, however, that after the reservoir is filled they may be subject to some wave action and will be easily available to unauthorized diggers. Consequently, plans should be made for additional work in that district.

The survey in the Celina area was done in cooperation with the University of Kentucky, which furnished Mr. Schwartz with the necessary transportation and provided him with office and laboratory space for working over his material. Dr. William S. Webb, head of the university's department of anthropology, assisted Mr. Schwartz in an advisory capacity.

Missouri Basin.—Activities in the Missouri Basin continued to be supervised and directed from the field headquarters at the University of Nebraska in Lincoln. Paul L. Cooper served as acting field director from July 1 until October 3, when he was made field director for the Missouri Basin program. The operations in the Missouri Basin shifted in character during the course of the year. Where previously most of the activities had been concerned with preliminary surveys, a larger number of excavating parties were sent into the field and greater emphasis was placed on the actual salvage of materials from sites that eventually will be inundated.

From July 3 to November 21 a two-man archeological survey party headed by Robert L. Shalkop made preliminary reconnaissance of the Apex, Brenner, Clark Canyon, Gibson, Kelley, Landon, Nilan, and Wilson Reservoirs in Montana; the Middle Fork and South Fork projects in Wyoming; and the Narrows in Colorado. The party also revisited the Keyhole Reservoir area in Wyoming and the Moorhead and Yellowtail projects whose basins occur in both Montana and Wyoming. The Shalkop party located and recorded 127 new sites. From August 12 to November 3 a two-man party led by George Metcalf investigated the area of the Fort Berthold Reservation in the Fort Garrison area in North Dakota, locating and recording 55 new sites. During October a two-man reconnaissance party under Richard Page Wheeler visited 10 potential reservoirs in the Niobrara subbasin in Nebraska. The party found a total of 41 archeological sites. Robert B. Cumming, Jr., and an assistant carried out a reconnaissance of the Ashton Reservoir area in the Lower Platte basin in Nebraska from November 7 to 15 and at the same time examined the sites of the Sargent, Woods Park, and Ashton Feeder canals. Since only one archeological site was found by Cumming's party, the area does not appear to have had much aboriginal occupation. This party also investigated an ossuary that had been uncovered at the Cushing dam site. During the period June 5 to 9, Franklin Fenenga and an assistant surveyed the Lovewell Reservoir area on White Rock Creek in northern Kansas and recorded six archeological sites. On June 19 Fenenga and an assistant proceeded to Wyoming and by the end of the fiscal year had made surveys at the Bull Creek, Smith, Buffalo Bill, Triangle Park, Willow Park, and Red Gulch Reservoirs. Five sites were found in the Bull Creek Reservoir and one large workshop area, which may be relatively old, was discovered in the Red Gulch Reservoir. None of the other projects visited contained archeological manifestations.

At the beginning of the fiscal year a party under the direction of Richard Page Wheeler was excavating at the Long site in the Angostura Reservoir basin on the Cheyenne River in South Dakota. That

work, which had been started in the previous year, continued until July 19, when the Wheeler party moved to the Boysen Reservoir area in Wyoming. The Long site is of particular interest because it represents one of the early hunting-culture occupations in the Plains area. The material from it is limited in quantity, but the blades, scrapers, and projectile points probably can be correlated with some of the types from other hunting cultures and will aid materially in filling in the gaps in present knowledge about the prehistory of the western Plains. Charcoal obtained from unprepared hearths has been dated by Dr. W. F. Libby by the carbon-14 method and shows that the occupation at the Long site was in the interval from $7,073 \pm 300$ to $7,715 \pm 740$ years before the present.

The Wheeler party began work in the Boysen Reservoir area on the Big Horn River near Shoshoni, Wyo., on July 20 and continued operations until September 20. During that period a number of sites were tested, and fairly extensive excavations were carried out at three locations. Most of the sites were in the open and proved to be the remains of camps rather than of villages. One small rock shelter was found to contain considerable refuse material as well as various types of artifacts and broken animal bones. One crevice burial, discovered on a butte top overlooking the reservoir area, presumably belonged to the historic period as a number of porcelain beads and a short coil of iron were sifted from the sand that lay directly below the crevice. Two of the sites examined probably are late prehistoric, while the others are older, perhaps considerably older. In addition to the excavating work, the Wheeler party photographed and sketched many petroglyphs and made extensive surface collections from numerous occupational sites, several of which were newly discovered while the digging was going on.

On June 21 Wheeler and his field assistant, J. M. Shippee, returned to Wyoming and started excavations at the only known pottery site in the Keyhole Reservoir area on the Belle Fourche River near Moorcroft. By the end of the fiscal year they had dug three shallow test areas across the site and recovered a series of artifacts consisting of stone and bone implements and a variety of potsherds. The apparent absence of dwellings of any kind, the shallowness of the middenlike deposits, and the character of the material found there suggest that the site, which covers approximately 30 acres, was a late prehistoric or protohistoric hunting camp. The work there had not yet progressed sufficiently to make possible the correlation of the remains with one of the historic tribes known to have inhabited that part of Wyoming.

The largest excavation operations in the Missouri Basin during the year were those in the Oahe Reservoir area on the main stem of the Missouri River near Pierre, S. Dak. A party under the supervision of Donald J. Lehmer was digging in the remains of a large

fortified village near the Oahe dam site on July 1 and continued at that location until October, when it was shifted to another fortified village a short distance farther downstream. At the first location, called the Dodd site, the remains of 21 earth lodges, 27 cache pits, and 16 miscellaneous features were uncovered. In addition, 8 test trenches and 27 test pits were dug. The Dodd site is of particular interest because of the fact that three types of houses were found there, and there was definite stratigraphic evidence for a sequence of the various forms. The latest structures at the location had been circular earth lodges, while the earlier ones were rectangular. There apparently were two types of rectangular earth lodge, the oldest being smaller and with a somewhat different pole arrangement than the later ones. Although it has not been established beyond question, it appears that the circular houses were those built by the Arikara, while the rectangular ones are attributable to the Mandan. Several thousand specimens, consisting of potsherds, stone, bone, shell, and metal artifacts, were found during the digging, and the analysis of that material should be a definite contribution to the archeology of the area. At the second location, known as the Phillips Ranch site, 5 earth lodges and 46 cache pits had been cleared and one test trench dug across the fortification ditch when weather conditions brought the activities to a close on November 26. The structures at the Phillips Ranch site were circular and appear to correlate with those of the final period at the Dodd site. Mr. Lehmer returned to the Phillips Ranch site on June 20 and resumed his excavation program. It was still under way at the close of the fiscal year. During the short period involved one house was completely cleared and another started. The presence of a palisade inside the fortification ditch surrounding the site was established, and the overburden from the northeast quadrant of the area was stripped away, revealing a number of features lying outside the houses.

Additional work in the Oahe area got under way in June when a party under the direction of Dr. Waldo R. Wedel, who was detailed to the River Basin Surveys from the U. S. National Museum, began excavations at the Cheyenne River village site, about 45 miles north of the Dodd site. The Cheyenne River village is one of the largest and best preserved of the fortified sites along the Missouri River, although a portion of it has been carried away by the encroaching stream. It apparently was occupied for a considerable period and probably contains several components. By the end of the fiscal year one earth lodge had been uncovered, the work on a second was nearly completed, and digging had started on a third. One cache pit had been cleaned and another located. Two test trenches excavated across the moat had shown that the original bottom was about 6 feet below the present surface. The artifact yield from the investigations was proving

highly satisfactory, and the artifacts should give a well-rounded picture of the material culture of the former occupants of the village, as well as indicating their relationship to other peoples in that portion of the Plains.

Early in July a party led by Thomas R. Garth started investigating historic sites in the area to be affected by the Fort Randall Reservoir in South Dakota. They spent a short time examining the site of old Fort Randall, across the river from Pickstown, but devoted most of the field season to work in the vicinity of Chamberlain. Extensive but unsuccessful efforts were made to locate the site of Fort Recovery, an early fur-trading post. The remains of other trading posts and military establishments were found, however, and partially investigated. Included in that group are Fort Hale, Fort Brule, Fort Lookout trading post, Fort Lookout military post, and the Whetstone Agency. At Fort Hale there was evidence of a large building that probably had been a trading post, two smaller buildings, and indications of a stockade. There was also evidence that there had been an earlier Indian occupancy of the site. At Fort Lower Brule the remains of a cabin 45 feet long were uncovered, and an 18-by-12-foot cellar was excavated. An abandoned well was also investigated, and about 30 "snow snakes," some of which were decorated with geometric and some with realistic designs, were recovered. "Snow snakes" were frequently made from bison ribs and in some cases were equipped with feathers stuck to two wooden pegs inserted in one end of the bone. Objects of this type were generally used in playing a rather simple game, which consisted of sliding them along the frozen crust or in a rut in the snow. The players chose sides, and when a "snake" outdistanced all on the other side it counted as a point. The remains of the fur-trading post, presumably adjacent to the military post, were found, and an Indian earth lodge was located while the area was being tested for the historic remains. The Garth Party also located 29 new Indian sites in the Chamberlain area.

Further work was started in the Fort Randall Reservoir area on June 3 when a party under the supervision of Robert B. Cumming, Jr., began excavations at Indian sites near the mouth of Platte Creek. Work was started at the Oldham site, an earth-lodge village, and at the close of the fiscal year the remains of one house had been uncovered and a second was in the process of excavation. Efforts to trace the fortification ditch that had surrounded the village had not been wholly successful because surface indications of a large part of that feature had been completely obliterated by cultivation. However, it was hoped that subsequent digging would make it possible to follow its entire course.

At the beginning of the year a party under the direction of G. Ellis Burcaw was excavating at the Rock Village located in the Gar-

rison Reservoir basin, near Hazen, N. Dak., a few miles above the dam site. Rock Village was reputedly occupied in the late eighteenth century by the Hidatsa. During the field season, which terminated November 3, five house floors had been uncovered and a number of other features investigated. A party under the direction of Donald D. Hartle resumed work at that location early in June. Additional house floors were being uncovered and a number of cache pits had been cleaned of their accumulated debris. The artifact yield was proving satisfactory and the specimens should add to the picture of the Plains culture as a whole. Rock Village is particularly interesting because it presumably was the most northerly of the fortified earth-lodge villages belonging to the period preceding the replacement of aboriginal material culture by trade goods obtained from the white man.

A second party, under the direction of G. H. Smith, was sent to the Garrison Reservoir in June to study the site of Fort Stevenson, one of the important military posts in that area during the period 1867 to 1883. The post was located a few miles above the dam site on the left side of the Missouri River. By the end of the year the foundations of the post hospital had been traced and excavations had been started on the site of the south barracks. There is considerable documentary information about Fort Stevenson, but knowledge of the post will be considerably broadened by the study of its actual location and remains.

At the beginning of the fiscal year excavations were being conducted at the Tiber Reservoir on the Marias River in Montana by a party under the supervision of W. D. Enger. Two of the sites investigated were occupation levels attributable to a simple hunting culture. They were characterized for the most part by hearths; charcoal; bones from bison, deer, and smaller mammals; and scattered chips of stone with an occasional artifact. The cultural levels began approximately 2 to 4 feet beneath the present surface, and in one of them a rock-ringed hearth about 2 feet in diameter was found 7½ feet below the surface. The yield from both sites was small, but there is sufficient evidence to indicate that the area was not heavily populated and that the people were dependent for the most part on the hunt for their subsistence. Other sites examined, but not extensively dug, included tipi-ring clusters, bison kills, and surface camp sites. Sites such as that containing the deeply buried hearth may contribute important information on the rate of deposition in the area in question. When materials from the low level are correlated with those from other districts, it may be possible to determine the lapse of time since the fire pits were built and used.

Paleontological and geological investigations were continued in the Missouri Basin during the year. In the summer of 1950 a party under Dr. Theodore E. White explored Tertiary deposits in reservoir

areas in Montana and North Dakota and Cretaceous deposits in South Dakota. Work in the Lewis and Clark and Broadwater Counties in Montana where the Tertiary stratigraphy has been imperfectly known since its discovery in 1904 by the late Dr. Earl Douglass definitely established the presence of Lower and Middle Oligocene and Lower and Middle Miocene in that area. In North Dakota the investigations demonstrated that the Cannonball Marine member of the Fort Union formation has a much greater areal distribution than was formerly supposed. Other activities consisted of rapid surveys of proposed reservoir projects in Nebraska and Colorado. Investigations in Montana were resumed in June of 1951.

Laboratory activities at the field headquarters in Lincoln during the year included the processing and cataloging of specimens; the processing of records, including the indexing and filing of photographs; and the preparation and mimeographing of preliminary reports for distribution to the cooperating agencies. The specimens processed, numbering 84,255, came from 371 sites distributed over 18 reservoirs and other projects. In all, 11,764 reflex copies of records were made. Color transparencies totaling 651 were cataloged. Black-and-white photographic negatives numbering 1,707 were made, and 7,507 contact prints were processed. In addition, 197 8-by-10" enlargements were made. The drawings, tracings, and maps prepared for use in the various reports numbered 469.

Several exhibits were prepared interpreting the salvage program and the prehistory of the Missouri Basin area. One of them was displayed at the Eighth Conference for Plains Archeology, while another was placed in the windows of the Surveys' quarters in downtown Lincoln. A series of lantern slides illustrating the salvage program, particularly with respect to Nebraska, for use in an automatic projector, was prepared in cooperation with the University of Nebraska State Museum and was installed in the latter institution.

G. Ellis Burcaw, archeologist, was in charge of a field party excavating at the Rock Village in the Garrison Reservoir, N. Dak., at the start of the fiscal year. He continued his activities there until late in October and returned to the field headquarters at Lincoln on November 3 where he worked on his field report covering the summer's activities.

Paul L. Cooper, field director, devoted most of his time to management problems and general supervision of the field office and laboratory. He made numerous trips to inspect and consult with field parties and served in an advisory capacity to the Region Two office of the National Park Service at Omaha, Nebr., in the matter of preparing agreements for cooperative projects carried on by State and local institutions in the Missouri Basin.

Robert B. Cumming, Jr., archeologist, served as laboratory supervisor at the Lincoln headquarters from July 1 to November 6. During such times as the director was absent from the office, Mr. Cumming assumed administrative responsibility for the Lincoln office. After November 6 Mr. Cumming took over the duties of a field archeologist, conducting surveys in the Ashton Reservoir area and carrying on excavations in the Fort Randall Reservoir basin. During the winter months he wrote a preliminary report on the results of his survey work and assisted with the preparation of a preliminary report on the Oahe Reservoir. He also prepared a report on the physical anthropology of skeletal material excavated at the Massacre Creek site, Nebr., by the Nebraska State Historical Society, a cooperating institution. At the close of the year he was supervising the excavations at the Oldham site near Platte, S. Dak.

Walter D. Enger, Jr., archeologist, was engaged in a series of excavations at the Tiber Reservoir on the Marias River in Montana at the beginning of the fiscal year. The party under his supervision continued its activities until September 16, when it returned to the Lincoln headquarters.

Franklin Fenenga, archeologist, reported to the headquarters at Lincoln, Nebr., on October 26 and served as laboratory supervisor from November 6 to June 1, when he was assigned to duty in the field. Early in June he made a survey of the Lovewell Reservoir area in Kansas and in the latter part of the month made a preliminary reconnaissance of six potential reservoir areas in Wyoming. During the winter months in Lincoln he wrote preliminary archeological reconnaissance appraisals of the Sun River basin and the Jefferson River basin which were issued in mimeograph form. He also prepared survey reports for the following reservoir projects: Keyhole, Yellowtail, Narrows, Moorhead, Fort Randall, and Lovewell. In addition, Mr. Fenenga wrote "A Historical Analysis of Anthropological Interests in the Psychological Sciences," for publication in the Proceedings of the Nebraska Academy of Sciences. In November Fenenga was elected editor of the Plains Conference News Letter.

Thomas R. Garth, archeologist, joined the River Basin Surveys on July 2 by transfer from the National Park Service. On July 17 a party under his supervision began a series of investigations of historic sites in the Fort Randall area. That work continued until late in October, when he turned his attention to a survey of the area in the vicinity of Chamberlain, S. Dak., for the purpose of locating Indian sites. He completed his reconnaissance and returned to the Lincoln office on November 7. On November 27 he was detailed to the National Park Service to complete reports on work he had previously done at the Whitman Mission and Fort Walla Walla in Washington.

He returned to duty with the River Basin Surveys on February 27, when he prepared a report on the results of his activities in the Fort Randall area.

Donald D. Hartle worked at the Oahe Reservoir as assistant to Donald J. Lehmer from the beginning of the fiscal year until December 1. During February and March he was employed on a Texas project. On April 17 he was appointed archeologist and from then until June 1 assisted in the laboratory at Lincoln. He then proceeded to the Rock Village site in the Garrison Reservoir, N. Dak., where he started a series of excavations which were still under way on June 30.

Donald J. Lehmer, archeologist, was in active supervision of the excavations at the Oahe Reservoir in South Dakota from July 1 until December 1. From the latter date until March he worked at the Lincoln office preparing the report on the results of his investigations at the Dodd site. In March he was transferred from the Missouri Basin headquarters to a project in Oklahoma, where he remained until the first of June, when he returned to the Lincoln headquarters. On June 20 he proceeded to the Oahe Reservoir and resumed excavations at the site where he was working when the field season ended the previous November. That work was continuing at the end of the fiscal year. While at Lincoln Mr. Lehmer completed a paper giving preliminary descriptions of the pottery types found at the Dodd site.

George Metcalf, field and laboratory assistant, was at the Angostura Reservoir in South Dakota assisting Richard Page Wheeler at the beginning of the fiscal year. On July 10 he returned to the Lincoln office, where he worked on material obtained during the course of excavations at the Medicine Creek Reservoir. On August 12 he proceeded to the Garrison Reservoir and joined the party under G. Ellis Burcaw. From August 22 until October 18 he carried on a reconnaissance of the area around the Fort Berthold Indian Reservation and located and recorded 55 sites, including historic buildings, the remains of earth-lodge villages, camp areas, deeply buried hearths, tipi-ring sites, burial sites, and one reputed battleground. After completing the survey he remained at the Rock Village excavation assisting Mr. Burcaw until the end of the field season, when he returned to Lincoln. During the winter months he assisted in the processing and analysis of materials from the various excavations and helped to prepare sections of some of the reports on the previous season's work. On June 1 he left Lincoln for the Garrison Reservoir to assist in the work at the Rock Village. At the end of the fiscal year he was continuing his activities at that location.

James M. Shippee, field and laboratory assistant, was at the field headquarters in Lincoln until July 17, when he left to join the excavating party at the Angostura Reservoir in South Dakota. He assisted in the activities there and accompanied the party when it moved to

the Boysen Reservoir in Wyoming, returning with it to Lincoln in September. During the period September 28 to October 30 he assisted in the survey in the Niobrara River subbasin in Nebraska and from November 7 to 15 aided in the examination of the Ashton Reservoir area and the region adjacent to the Sargent, Woods Park, and Ashton Feeder canals. He also assisted in the salvage of the burials uncovered by activities at the Cushing dam site. During the winter months he devoted his time to the restoration of pottery vessels from the Boysen and Oahe Reservoirs and assisted in other laboratory duties. On June 21 he accompanied the excavating party that was sent to the Keyhole Reservoir in Wyoming and was occupied there at the end of the fiscal year.

George H. Smith joined the River Basin Surveys staff as archeologist on May 2. Until June 4 he devoted his time to a study of the problems centering about historic sites in the Fort Randall, Oahe, and Garrison Reservoirs, and in familiarizing himself with the work already accomplished in those areas. He also made a quick trip to the Oahe and Garrison Reservoirs in company with M. J. Mattes and R. H. Mattison, historians of the National Park Service. On June 11 a party under his supervision began excavations at the site of Fort Stevenson, and at the close of the fiscal year he was still engaged in that activity.

At the beginning of the year Richard Page Wheeler, archeologist, was in charge of a party excavating at the Angostura Reservoir in South Dakota. In July he and his party moved to the Boysen Reservoir in Wyoming, where they carried on excavations until September 20. Wheeler then returned to the headquarters at Lincoln and from September 28 through October 30 directed the survey of 10 potential reservoir sites in the Niobrara River subbasin in northern Nebraska. Returning to the field headquarters, he spent the winter months completing his report on the Niobrara survey and working on detailed technical reports on his investigations in the Angostura and Boysen areas. On June 21 he left for the Keyhole Reservoir near Moorcroft, Wyo., where he began a series of excavations which were actively under way at the end of the fiscal year. In April Mr. Wheeler was elected chairman of the anthropology section of the Nebraska Academy of Sciences to serve for 1952.

On July 1 Dr. Theodore E. White, paleontologist, was investigating deposits in the Canyon Ferry Reservoir. From there he proceeded to the Garrison Reservoir and subsequently to the Fort Randall Reservoir. At all three locations he collected fossils and continued his studies of the geology of the various areas. From September 22 to 29 he made a rapid survey of 10 proposed reservoir projects in the Niobrara River subbasin in Nebraska. The completion of that task in so short a time was made possible through the cooperation of Morris

Skinner of the Frick Laboratories who is thoroughly familiar with the area. From October 8 to 14 Dr. White examined Pliocene deposits in the Bonny Reservoir in northeastern Colorado. From November until June he was engaged in work elsewhere. Returning to the Missouri Basin on June 17, he proceeded to the Canyon Ferry Reservoir in Montana to continue his search for fossils. Nearly 100 specimens were collected, including forms previously unknown from the area. Those from the Oligocene deposits consisted of marsupials, insectivores, rodents, and small artiodactyls. The larger animals, such as the rhinoceroses, are represented only by fragments. The material obtained from the Miocene deposits consists of large oreodonts, beavers, rabbits, and small rodents. While at the Lincoln office Dr. White prepared a paper, "Observations on the Butchering Technique of Some Aboriginal Peoples," which was presented before the Eighth Annual Conference for Plains Archeology held at Lincoln late in November.

Oklahoma.—During the fiscal year both surveys and excavations were carried on in Oklahoma. From July 1 to August 10 Leonard G. Johnson and James G. Smith, field assistants, made a reconnaissance of the Gaines Creek Reservoir on Gaines Creek, a tributary of the South Canadian, in eastern Oklahoma. They located 52 archeological sites, most of which indicate temporary occupation despite the fact that at two locations there were mounds, and at other places villages seemed to have existed. Most of the sites in the Gaines Creek area were found on high ground above the high-water mark, but a number of those that will be flooded appear to be of some significance, and excavations have been recommended for six of them. In addition to the aboriginal remains, the former location of one historic settlement, North Fork Town, was established. The Gaines Creek Reservoir constitutes part of an alternate plan that has been prepared for that area. One plan calls for a single large reservoir to be known as the Eufaula. The other calls for three smaller projects which in the main will inundate approximately as large an area as the one reservoir. In view of that situation the surveys have been carried on from the standpoint of the three smaller reservoirs but extending the investigations sufficiently beyond their limits to take in the one large project. The other two smaller reservoirs, the Canadian and the Onapa, were surveyed during previous years. At that time the Canadian was found to involve 41 archeological sites and the Onapa 25. With the results of the Gaines Creek survey, it now is evident that a total of 118 sites will be included in the Eufaula basin if the one large project is carried through. If only one or two of the smaller reservoirs are completed, the archeological salvage needs will, of course, be less.

After completing their studies at the Gaines Creek project, Johnson and Smith proceeded to the Optima Reservoir area on the North Canadian (Beaver) River in Texas County. The dam for the project is to be erected just above the confluence of the North Canadian and Coldwater Creek and will flood areas along both streams. Three sites were found along the North Canadian and one along Coldwater Creek. In all cases they were found to be above the high-water line, and there is no urgency with respect to excavating them. Site 3 lies at the upper end of the basin that will be flooded along the North Canadian, and investigation at some future date has been recommended.

The excavations made in Oklahoma were in the area to be flooded by the Tenkiller Ferry Reservoir on the Illinois River near Tahlequah. Some testing was done at two locations, but most of the work was at a third, known as the Cookson site, where a party under the direction of Donald J. Lehmer dug 6 houses, 4 graves, 2 hearths, and 31 cache pits. Two components were isolated. The early one was characterized by rectangular houses with four center posts and trench entrances, while the later was characterized by rectangular houses with two center posts and indications of a bench along the north wall. There was no evidence of an entryway for these houses. The projectile points accompanying the early horizon fall within the range that is considered typical of Archaic and early Woodland in the Southeast. They also are common in the material from the prepottery Grove Focus in northeastern Oklahoma. Associated potsherds indicate a ware similar to the utility forms from the Spiro components. The latter ware in itself cannot be limited to an early horizon, but the small amount found in the excavations of the early component suggests that pottery was just beginning to appear in the complex. Stone artifacts in the late horizon differ somewhat from those of the earlier. Slate hoes and double-bitted axes are absent and projectile points are predominately small. The pottery associated with the late horizon is a shell-tempered ware which usually is decorated. The total complex has certain similarities to Orr's Fort Coffee Focus, but it probably will warrant being set up as a separate focus. The houses of the early horizon are similar to those considered typical of the early Spiro component, while those of the late horizon are quite similar to those for the late Spiro component.

The work at the Tenkiller Ferry was completed at the end of May, and Mr. Lehmer returned to the Missouri Basin headquarters at Lincoln. Throughout the period of the activities in Oklahoma, both for the surveys and the excavations, Dr. Robert E. Bell, of the University of Oklahoma, aided the field parties in the capacity of a consultant, and the University of Oklahoma cooperated in the loan of equipment and in making office space available to the men when they were in Norman.

Pennsylvania.—Investigations in Pennsylvania consisted of two survey projects. During October a reconnaissance was made of the Conemaugh River Reservoir in Indiana and Westmoreland Counties and of the East Branch Reservoir on the Clarion River in Elk and McKean Counties. The dam for the Conemaugh Reservoir, situated near Tunnelton, is scheduled for completion by December 1951. The reservoir will flood approximately 21 miles of the Conemaugh River and 11 miles of one of its larger branches, the Black Lick Creek. Within the pool area eight archeological sites were located. Of this group only one was deemed worthy of further exploration and excavation. It covers about 10 acres and is located on one of the larger terrace bottoms above the river near an old fording place. An Indian trail, the Venango, is supposed to have crossed the river at that point. The East Branch Reservoir apparently is located in a district where there was little aboriginal occupation because no archeological sites were found there. This probably may be attributed to the fact that the reservoir will fill a narrow V-shaped valley which was not suitable for Indian inhabitation. The surveys in Pennsylvania were made by Ralph S. Solecki.

Texas.—The River Basin Surveys in Texas continued to operate from the base and headquarters furnished by the department of anthropology of the University of Texas at Austin. Robert L. Stephenson was in charge from July 1 until April 15, when he was granted an extended leave of absence. Edward B. Jelks then assumed direction of the project. During the fiscal year surveys were begun and completed in the Ferrell's Bridge Reservoir on Cypress Creek in northeast Texas and in the Granite Shoals Reservoir on the Colorado River in central Texas. Excavations were continued and brought to completion in two field sessions in the Lavon Reservoir on the East Fork of the Trinity River, while the first field session at Garza-Little Elm Reservoir on the Elm Fork of the Trinity resulted in the excavation of two sites and the brief testing of three others. Excavations were also started and brought to completion in three sites in the Falcon Reservoir on the Rio Grande. The excavation of two sites and testing of three others were completed in the Belton Reservoir on the Leon River in central Texas.

The excavations started the previous year in the Lavon Reservoir were completed on August 2, with recommendation for additional excavation to be undertaken during the spring of 1951. The work there included excavation of over 40 percent of the large circular pit in the Hogge Bridge site as well as several test squares and several deep-strata squares outside the pit. The purpose for which the pit was built is still unknown, but it was determined that the site is a pure component of the newly delineated Wylie Focus. This is a culture complex probably overlapping the latter part of Gibson aspect and

the early part of Fulton aspect times in the Caddoan area and is coeval with the Henrietta Focus of the southern Plains area. It is not a part of either of those complexes but apparently an independent culture in contact with both and dating probably between 1300 and 1500.

Excavations were started in three archeological sites in the Falcon Reservoir on February 9. Donald D. Hartle was appointed temporary field archeologist for this project, and, under the supervision of Mr. Stephenson, he dug two historic sites and one deeply buried site. No positive evidence of Indian occupation was found in the two historic sites, which consisted of two and four stone-house ruins, respectively. Both probably may be referred to the Early to Middle Spanish Colonial period in the area. In the prehistoric site, a bulldozer was used for half a day and an area 20 feet by 40 feet was uncovered to an average depth of 12 feet below the surface, exposing an extensive occupation area which was excavated by hand in arbitrary 6-inch levels to an additional depth of 18 inches. Large quantities of workshop refuse and 200 artifacts were recovered from the level. The stratigraphic profile provided by the 12-foot trench wall revealed two additional occupation levels at depths from the surface of approximately 4 and 7 feet, respectively.

In the Ferrell's Bridge Reservoir, E. O. Miller and E. H. Moorman conducted a survey from January 29 to February 16 and from April 9 to 21. During that survey 34 archeological sites were located and recorded. Five of them contain small artificial earth mounds; the remainder are open occupational areas. Six of the sites have been recommended for further excavation.

The Belton Reservoir, surveyed the preceding year and recommended for no further excavation, was later found to contain two previously unknown archeological sites meriting some investigation. Mr. Miller and Mr. Moorman, who had located the sites, spent the periods December 11 to 13 and February 28 to March 2 in brief excavations of the Urbantke site and the Grimes-Houy site. In addition, they made extensive tests in three other nearby sites. It was found that the Urbantke site contained considerably more pottery than most of the sites in the area. The artifact analysis showed considerable similarity to the three rock shelters excavated the previous year in the Whitney Reservoir area. The excavations at the Grimes-Houy site uncovered 10 burials, and analysis of the artifacts and site features indicates a relatively late date. It possibly was a Comanche burial site.

The second season of excavations at the Lavon Reservoir was begun on March 12 and continued until May 4. The work included further digging in the Hogge Bridge site and extensive excavations in the Branch and Campbell Hole sites. In order to determine quickly the stratigraphic profile involved in the large circular pits in those sites,

a bulldozer was used for a total of 22½ hours. This provided extensive stratigraphic trenches through the pit and the midden areas in the Branch and Hogge Bridge sites and one long exploratory trench in the Campbell Hole site. The use of a bulldozer for this work proved very satisfactory, and little material damage was done to the artifacts or the features encountered.

The first field session at the Garza-Little Elm Reservoir was begun on May 7 and continued until June 13. Extensive excavations were completed in the Lake Dallas and Ledbetter sites and brief tests were made at the Pease and Craft sites. One of the few large Archaic sites in this area, the Lake Dallas site, yielded artifacts that should be valuable in the integration of the Archaic complexes of northeast Texas. At the Ledbetter site—one of the most extensive local examples of the later agriculture-pottery period—an interesting group of artifacts was found that suggests contacts with both the Caddoan peoples to the east and the peoples who lived to the west and southwest.

At the Granite Shoals Reservoir, surveyed during February and March by Robert H. Humphreys, 12 archeological sites were located and recorded. They are all open occupational areas along the narrow valley of the Colorado River. None are extensive or deeply stratified, and since some information is on record from sites both upstream and downstream from this project no further investigations are recommended. Such evidence as was found during the reconnaissance and testing indicated that the Granite Shoals region probably was occupied by people of the Round Rock and Uvalde Foci over a period of many centuries.

Dr. Theodore E. White spent the first 2 weeks in April in the Austin laboratory identifying the faunal remains from the archeological excavations of the Whitney, Lavon, Belton and Falcon Reservoirs. During the remainder of April and the first week of May, he collected fossils from the Upper Cretaceous deposits of the Lavon Reservoir. He devoted most of May to investigations at the Garza-Little Elm Reservoir, where he located and collected several vertebrate specimens of Pleistocene age. They included a bison skull, a turtle, and a horse jaw.

When he was not in the field, Robert L. Stephenson, archeologist, devoted his time to analysis and study of the archeological materials from the Lavon and Whitney Reservoirs and in organizing and programming the work for the various field parties sent out from the Austin headquarters. He completed an article on "Culture Chronology in Texas," which was published in *American Antiquity*, and finished a paper, "The Hogge Bridge Site and the Wylie Focus," for publication in the same periodical.

Edward B. Jelks, archeologist, assisted Mr. Stephenson in the field and laboratory throughout the year until April 15, when he took

over supervision of the Texas project. He spent most of the remainder of the year in the field at the Lavon and Garza-Little Elm excavations. He prepared a "Field Manual for Beginners in Central Texas Archeology," which was mimeographed and distributed to amateur archeologists who had requested guidance. As a result of historical research undertaken to supplement archeological investigation at the Stansbury site in the Whitney Reservoir, he prepared a paper, "Indians of the Central Brazos Area," which was presented at the annual meeting of the Texas Historical Association on April 27.

E. O. Miller and E. H. Moorman served as field and laboratory assistants throughout the year. They participated in the investigations in the Lavon and Garza-Little Elm Reservoirs, began and completed the excavations in the Belton Reservoir, and carried on the survey of Ferrell's Bridge Reservoir. The remainder of their time was spent in the laboratory in Austin cataloging and tabulating the materials from the various field projects and preparing a report on their survey of the Ferrell's Bridge Reservoir.

As a result of the financial status of the River Basin Surveys' work in the Texas area, the Austin office was closed on June 30.

Virginia.—Field work in Virginia during the year included the survey of one reservoir area and the excavation of a number of sites in another. On July 1, Carl F. Miller was digging at a site immediately east of Clarksville, Va., on the east bank of the Roanoke River in the Buggs Island Reservoir. Stripping operations there had destroyed a large part of the site before information was received about the work under way. Consequently, it was possible to salvage material from only two small portions of the site. From those areas 77 burials with their accompanying artifacts were recovered, and various midden pits, as well as the remains of a rectangular structure, were uncovered. That project was completed early in August. On February 28, excavations in the Buggs Island area were resumed, and from then until June 20, digging was carried on at nine different sites. At one there was stratification showing that it was first occupied during the pre-ceramic times and had continued in use until about the middle of the ceramic period, when it was abandoned. Two of the sites investigated were on Occaneechi Island near Clarksville. One of them contained heavy cultural deposits consisting of both Indian and European materials. Unfortunately, there had been so much disturbance by the later occupation that it was difficult to obtain satisfactory evidence from it, although a good series of artifacts was found. The second site on the island was one of the largest thus far examined in the basin. Forty-four burials were found there representing all types from fully flexed to partial cremation. The burned floor area of a large rectangular structure measuring 35 by 15 feet was uncovered. The house had five distinct floor levels interspersed with layers of clean sand.

Whether that indicated five separate occupations of the structure or remodeling activities during the course of a long-continued tenancy is not known, but further study of the data obtained from the digging may throw light on the subject. The structure had been built over a number of burials, and after it was abandoned other graves were dug through the floor, showing that the site continued to be inhabited after the dwelling had burned. A number of the burials were accompanied by turtle carapaces, which undoubtedly were placed there as funerary offerings. They do not seem to have been used as food receptacles, for in every instance they were inverted. Possibly they may have had totemic significance and were placed with the dead to indicate that the individual was a member of the turtle clan. A good pottery series obtained from the site should fill certain gaps in the sequence for the area. The work on Occaneechi Island indicates that it was not the place where the village mentioned by Lederer, who visited it in 1670, was located and that previous identification of it as such was in error. The current investigations indicate that the Occaneechi village probably was on another island lying some distance downstream from the one that now bears that name.

It had been hoped that at two of the sites, where fluted points and other artifacts suggestive of the eastern variant of the Folsom complex had been picked up from the surface, some remnants of the deposits belonging to that period would still be intact. The excavations showed, however, that the sites had suffered extensive erosion and that the artifacts previously found there were simply float material that remained when the deposits were carried away. Additional work still remains to be done at the Buggs Island Reservoir. The survey was made at the Philpott Reservoir during the last week in June. The archeological manifestations found there are so closely related to those in the Buggs Island area that no additional work will be required. Materials gathered from the surface are so similar to those from Buggs Island sites that they could not be recognized if placed in the same collections.

West Virginia.—The only work done in West Virginia during the year was the brief survey made at the site of the new navigation lock at Morgantown. Examination of the area involved by the construction disclosed that practically no new lands will be inundated by the project. The water there is to be kept within the limits of the river channel, which has rather steep and confining banks. Railroads parallel the channel on both sides, and any archeological remains that may have been there at one time were long since destroyed. No further investigations are necessary at that project.

Cooperating institutions.—Various State and local institutions cooperated with the River Basin Surveys during the year. Space for field offices and laboratories for units of the Surveys were provided

by the Universities of Nebraska, Oregon, Georgia, and Texas. The Universities of Oklahoma and Kentucky furnished temporary bases of operations for the parties working in their States. The University of Oklahoma took over the responsibility for the excavation of sites in the Fort Gibson Reservoir, and the University of Georgia continued making surveys along the Flint River in the southern part of that State. The University of Missouri and the Missouri Archeological Society continued to make surveys in a number of proposed reservoir areas and carried on excavations in others. The University of Arkansas also made surveys and did some digging in reservoir areas in that State. In June, parties with which the River Basin Surveys were cooperating began excavations in the McNary Reservoir and at Lind Coulee in Washington. The McNary party came from the University of Washington at Seattle; that at Lind Coulee from the Washington State College at Pullman.

The program developed by the National Park Service late in the previous year whereby various scientific agencies carried on salvage work in proposed reservoir areas continued throughout fiscal year 1951. On the basis of agreements between the agencies concerned and the National Park Service, certain funds were made available to the agencies to help finance specified investigations. The River Basin Surveys served in a consultative and advisory capacity only in the carrying out of that program. Agreements were made, however, with the University of Nebraska, the Nebraska State Museum, the Nebraska State Historical Society, the University of Kansas, the University of South Dakota, the North Dakota Historical Society, the University of Wyoming, and the University of Montana for work in the Missouri Basin. Similar agreements were made with the University of Mississippi for a survey of the Grenada Reservoir in that State, with the University of Oklahoma for excavations at the Eufaula Reservoir, with the University of Texas for excavations at the Falcon Reservoir, with the Museum of New Mexico at the Chamita Reservoir, with the University of California for excavations at the Farmington Reservoir, and with the University of Washington for work in the McNary area. The final results of the work accomplished under those agreements will be published by the institutions concerned, but they will correlate with and augment the information obtained by the River Basin Surveys.

INSTITUTE OF SOCIAL ANTHROPOLOGY

(Report prepared by G. M. FOSTER)

General statement.—The objectives of the Institute of Social Anthropology are anthropological research on the community life of rural peoples of Latin America and the training of Latin American

nationals in the methods and principles of modern social anthropology. The purpose is to inform both the social scientist and layman in the United States concerning little-known peoples of other parts of the world and to build up in various Latin American countries a corps of professionally trained scientists and friends.

During the past year the Institute was financed by transfers of funds from the Department of State, totaling \$92,740, from the appropriation "International Information and Educational Activities, 1951." As in the previous year, long-term planning has been done on a very tentative basis because of budget uncertainties for the future. Nevertheless, a full program was maintained in all countries, and work on a short-term basis was initiated in Guatemala. The year in review has seen increasing interest on the part of the Institute in a more direct application of anthropological knowledge and techniques to the practical problems of social and economic change that face Latin American countries. Accordingly, for the first time an attempt was made to enlist Institute personnel in a common research problem in all four countries in which programs have been maintained for several years for the purpose of pointing up some of the types of contributions anthropologists can make to "action" programs of economic and social betterment in so-called underdeveloped areas. It was decided that an analysis of American-sponsored technical-aid programs, with a history of several years of successful operations, might reveal common operational problems, the solution of which might be facilitated by anthropological counseling. After reviewing a number of programs, it was decided that health centers developed by the Institute of Inter-American Affairs in cooperation with the Ministries of Health of México, Colombia, Perú, and Brazil would be the most satisfactory subjects. Two centers in each country, one urban and one rural, were selected, and during March and April the operations of these centers were studied, particularly in relationship to the basic cultures of the peoples served. A dual goal was envisaged: (1) that of determining, if possible, what may be the common factors that favor and factors that inhibit the introduction and acceptance of ideas and habits new to the ethnic groups in question; (2) that of pointing up difficulties in going projects, and making remedial suggestions. A 100-page mimeographed report was prepared, which outlined the theoretical basis for the work, described the work of health centers, discussed salient aspects of indigenous culture that were affected by this work, and made suggestions as to how utilization of anthropological knowledge would increase the effectiveness of such work. One hundred copies were sent to the Institute of Inter-American Affairs, and plans made to distribute additional copies to various national and international organizations carrying out a wide variety of technical-aid programs.

Major activities in each of the field offices, and in Washington, were as follows:

Brazil.—Drs. Donald Pierson, sociologist, and Kalervo Oberg, social anthropologist, continued their research and teaching activities in cooperation with the Escola Livre de Sociologia e Política in São Paulo. Dr. Pierson's administrative duties as dean of the graduate division occupied much of his time. In addition, he gave three courses in sociology and guided independent and graduate research. In February 1951, he directed an intensive course on rural life in Brazil, sponsored by several ministries of the state of São Paulo, to about 70 persons who are government employees and administrators in various offices. Dr. Pierson continued to develop plans for extensive social-science research as a part of the Brazilian Government's plan for economic and social development of the São Francisco River Valley. This planning came to a head with an offer from the National Commission of the São Francisco Valley to transfer \$27,000 to a fund to be directed by Dr. Pierson for intensive socioethnological study and analysis of the problems of industrialization and settlement in this enormous area.

Dr. Oberg returned to São Paulo in July 1950, via Lima, after a period of consultation in the United States. While in Lima he visited and consulted with Ozzie Simmons, Institute representative in that country. During the fall, and a part of the spring, he gave courses in anthropology as usual at the Escola. During March and April he carried out health-center investigations at Colatina, in the Rio Doce Valley, and Cameté, at the mouth of the Tocantins River in the Amazon basin. A lengthy report covering this work was submitted to the local offices of the Institute of Inter-American Affairs. In April Dr. Oberg represented the Smithsonian Institution and the United States Government in Rio de Janeiro at the Second Annual National Indian Week. At the end of the year plans were being completed to lend Dr. Oberg for a 6-week period to the Institute of Inter-American Affairs for additional anthropological work in Chonin, in Minas Gerais.

Colombia.—Because of the budgetary uncertainties it was necessary to discontinue the Colombian program in 1949. A new memorandum of understanding was agreed upon in November 1950 by the Ministry of Foreign Affairs of Colombia and the United States Department of State whereby it was agreed that future Smithsonian Institution activities in Colombia would be in collaboration with the Instituto Etnológico Nacional in Bogotá, directed by Licenciado Luis Duque Gómez, rather than with the Popayán branch of the Instituto, as in former years. Charles J. Erasmus joined the staff of the Institute of Social Anthropology in the fall of 1950 to take charge of this program. Mr. Erasmus has given a general course in ethnography at the Insti-

tuto Etnológico as a part of the regular curriculum of this organization. A number of Colombian towns and villages were surveyed for possible field work, and final decision was made on the village of Kota, about 20 kilometers to the north of Bogotá. This is a typical mestizo village of the Savanna of Bogotá, representative of much of rural Colombian life, and conveniently close to Bogotá so that short vacation periods as well as long field periods are possible. During March and April Mr. Erasmus devoted his time to the health-center research described in the introduction, working in the Ricuarte barrio of Bogotá, and in the Magdalena River port of La Dorada.

Guatemala.—Late in 1950, upon the request of Dr. Antonio Goubaud-Carrera, Guatemalan Ambassador to the United States, the temporary detail of an Institute ethnologist to Guatemala became possible. Accordingly, Richard N. Adams joined the staff, arriving in that country in December. In the seven months at his disposal Dr. Adams gave a general course in the Instituto de Antropología e Historia. A series of special lectures was also given to personnel of the Instituto Indigenista. Dr. Adams also supervised field research in several villages, including La Magdalena, near Guatemala City, in which the Central American Institute of Nutrition is carrying out long-range investigations. This work was designed to shed light on the cultural factor in a program aimed at bettering the nutritional and general health practices of the peoples concerned, and in gathering data applicable to similar projects in other Central American countries. Because of budgetary limitations it was, unfortunately, necessary to drop Dr. Adams from the Institute staff at the end of the fiscal year. Fortunately, it was possible to make arrangements for him to continue his Guatemalan work by means of a Department of State specialist grant.

México.—During the fall of 1950 Dr. Isabel T. Kelly, Institute representative, continued preparation of the second volume on the Tajin Totonac Indians, the first volume of which was sent to the printer in June 1950. In March 1951 she participated in health-center analyses, studying the Beatriz Velasquez Alemán Center in Mexico City, and that in the suburb of Xochimilco. Late in the winter she made a reconnaissance trip through the Sierra de Puebla and selected the highland Totonac village of San Marcos Eloxochitlán for field work. In April a 3-month period of field work was initiated, in which five students from the Escuela Nacional de Antropología participated. This study of a highland Totonac community will, among other things, in conjunction with the lowland Tajin Totonac afford data on the relationship of environment to culture.

Dr. William Wonderly joined the Institute in March 1951 to teach linguistics at the Escuela Nacional. This was the first time that linguistics had been taught in México under Institute of Social Anthro-

pology auspices since Dr. Stanley Newman left three years ago. Two courses were given, one on general linguistics and the other on morphology and syntax.

Perú.—Ozzie G. Simmons continued his teaching activities at the Instituto de Estudios Etnológicos in Lima. Field studies, in which several Peruvian students participated, were initiated in the non-Indian village of Lunahuaná, in the upper Cañete Valley, south of Lima. This work, when completed in 1951, will still further broaden our knowledge of contemporary Peruvian rural culture, which already includes the villages of Moche (Gillin), Sicaya (Tschopik, Muelle, and Escobar), and Virú (Holmberg and Muelle). During April Mr. Simmons carried out his part of the health-center investigations, studying the Lima center in Rimac barrio, and the center in Chimbote, on the north coast of Perú.

Washington.—Dr. Gordon R. Willey served as Acting Director of the Institute until September, at which time he went to Harvard University as Bowditch Professor of Mexican and Central American Archeology and Ethnology.

Dr. George M. Foster returned in September from a year's field trip to Spain to resume duties as Director of the Institute. While in Spain, Dr. Foster worked with Dr. Julio Caro Baroja, director of the Museo del Pueblo Español in Madrid, making a general survey, based on printed sources and field studies, of Spanish ethnography. Dr. Foster's part of the work was oriented toward the historical and theoretical problems involved in the carrying of Spanish culture to the New World, and its assimilation with native American culture. This work was planned to give added depth and background to the continuing studies of Institute and cooperating Latin American personnel.

Dr. Foster made a month's trip in March to Guatemala, Colombia, and Perú, for the purpose of consulting with Institute field personnel, and appraising the new Guatemalan project as well as the newly opened Bogotá office. Consultations were also held with heads of the participating national institutions in all three countries. Dr. Foster spent much of the month of June in assembling the health center's report.

EDITORIAL WORK AND PUBLICATIONS

There were issued one Annual Report and two Bulletins (one a volume of the Handbook of South American Indians), and two Publications of the Institute of Social Anthropology, as listed below:

Sixty-seventh Annual Report of the Bureau of American Ethnology, 1949-50. ii+25 pp. 1951.

Bulletin 143. Handbook of South American Indians. Julian H. Steward, editor. Volume 6, Physical anthropology, linguistics, and cultural geography of South American Indians. xiii+715 pp., 47 pls., 3 figs., 18 maps. 1950.

Bulletin 144. The northern and central Nootkan tribes, by Phillip Drucker. ix+480 pp., 5 pls., 28 figs., 8 maps. 1951.

Institute of Social Anthropology Publ. No. 11. Quiroga: A Mexican municipio, by Donald D. Brand, assisted by José Corona Núñez. v+242 pp., 35 pls., 4 maps. 1951.

Institute of Social Anthropology Publ. No. 12. Cruz das Almas: A Brazilian village, by Donald Pierson, with the assistance of Levi Cruz, Mirtes Brandão Lopes, Helen Batchelor Pierson, Carlos Borges Teixeira, and others. x+226 pp., 20 pls., 13 figs., 2 maps. 1951.

The following publications were in press at the close of the fiscal year:

Bulletin 145. The Indian tribes of North America, by John R. Swanton.

Bulletin 146. Chippewa child life and its cultural background, by Sister M. Inez Hilger.

Bulletin 147. Journal of an expedition to the Mauvaises Terres and the Upper Missouri in 1850, by Thaddeus B. Culbertson. Edited by John Francis McDermott.

Bulletin 148. Arapaho child life and its cultural background, by Sister M. Inez Hilger.

Bulletin 149. Symposium on diversity in Iroquois culture. Edited by William N. Fenton.

No. 1. Introduction: The concept of locality and the program of Iroquois research, by William N. Fenton.

No. 2. Concepts of land ownership among the Iroquois and their neighbors, by George S. Snyderman.

No. 3. Locality as a basic factor in the development of Iroquois social structure, by William N. Fenton.

No. 4. Some psychological determinants of culture change in an Iroquoian community, by Anthony F. C. Wallace.

No. 5. The religion of Handsome Lake: Its origin and development, by Merle H. Deardorff.

No. 6. Local diversity in Iroquois music and dance, by Gertrude P. Kurath.

No. 7. The Feast of the Dead, or Ghost Dance at Six Nations Reserve, Canada, by William N. Fenton and Gertrude P. Kurath.

No. 8. Iroquois women, then and now, by Martha Champion Randle.

Bulletin 150. The modal personality of the Tuscarora Indians, as revealed by the Rorschach test, by Anthony F. C. Wallace.

Bulletin 151. Anthropological Papers, Numbers 33-42.

No. 33. "Of the Crow Nation," by Edwin Thompson Denig. With biographical sketch and footnotes by John C. Ewers.

No. 34. The water lily in Maya art: A complex of alleged Asiatic origin, by Robert L. Rands.

No. 35. The Medicine Bundles of the Florida Seminole and the Green Corn Dance, by Louis Capron.

No. 36. Technique in the music of the American Indian, by Frances Densmore.

No. 37. The belief of the Indians in a connection between song and the supernatural, by Frances Densmore.

No. 38. Aboriginal fish poisons, by Robert F. Heizer.

No. 39. Aboriginal navigation off the coast of Upper and Baja California, by Robert F. Heizer and William C. Massey.

No. 40. Exploration of the Adena Mound at Natrium, W. Va., by Ralph S. Solecki.

- Bulletin 151. Anthropological Papers, Numbers 33-42—Continued
- No. 41. The Wind River Shoshone Sun Dance, by D. B. Shimkin.
- No. 42. Current trends in the Wind River Shoshone Sun Dance, by Fred Voget.
- Bulletin 152. Index to Schoolcraft's "Indian Tribes of the United States," compiled by Frances S. Nichols.
- Bulletin 153. La Venta, Tabasco: A study of Olmec ceramics and art, by Philip Drucker.
- Bulletin 154. River Basin Surveys Papers. Inter-Agency Archeological Salvage Program. Numbers 1-6.
- No. 1. Prehistory and the Missouri Valley Development Program: Summary report on the Missouri River Basin Archeological Survey in 1948, by Waldo R. Wedel.
- No. 2. Prehistory and the Missouri Valley Development Program: Summary report on the Missouri River Basin Archeological Survey in 1949, by Waldo R. Wedel.
- No. 3. The Woodruff Ossuary, a prehistoric burial site in Phillips County, Kans., by Marvin F. Kivett.
- No. 4. The Addicks Dam site:
- I. An archeological survey of the Addicks Dam basin, Southeast Texas, by Joe Ben Wheat.
 - II. Indian skeletal remains from the Doering and Kobs Sites, Addicks Reservoir, Texas, by Marshall T. Newman.
- No. 5. The Hodges site:
- I. Two rock shelters near Tucumcari, N. Mex., by Herbert W. Dick.
 - II. Geology of the Hodges site, Quay County, N. Mex., by Sheldon Judson.
- No. 6. The Rembert mounds, Elbert County, Ga., by Joseph R. Caldwell.
- Appendix. List of River Basin Surveys reports published in other series.
- Bulletin 155. Settlement patterns in the Virú Valley, Perú, by Gordon R. Willey.
- Institute of Social Anthropology Publ. No. 13. The Tajin Totonac: Part 1. History, subsistence, and technology, by Isabel Kelly and Angel Palerm.
- Institute of Social Anthropology Publ. No. 14. The Indian caste of Peru, 1795-1950: A population study based upon tax records and census reports, by George Kubler.
- Institute of Social Anthropology Publ. No. 15. Indian tribes of Northern Mato Grosso, Brazil, by Kalervo Oberg. With appendix by Marshall Newman on "Anthropometry of the Umotina, Nambicuara, and Iranxe."
- Institute of Social Anthropology Publ. No. 16. Penny capitalism: A Guatemalan Indian economy, by Sol Tax.

Publications distributed totaled 22,377 as compared with 19,116 for the fiscal year 1950.

LIBRARY

One hundred twenty-three volumes were added to the library of the Bureau, bringing the total accessions as of June 30, 1951, to 34,961.

ARCHIVES

Manuscript material has been made available to research workers both in the office and through the furnishing of microfilm copies. The

major project accomplished during the year was the classification of the great collection of Iroquois material assembled by J. N. B. Hewitt.

The addition of five new metal storage cabinets greatly improved the conditions for protecting the manuscripts. Since more cabinets could not be obtained, another method of storage for the material in the archives annex was developed. Using heavy cardboard filing boxes, graded to size, does away with the wrappings formerly used and makes the material much easier to consult.

A method of preserving the rare Indian drawings in the collections by the process of lamination was adopted on advice from the preservation division of the National Archives.

Through the librarian of the Geological Survey, the collections have been enriched by the addition of the original catalog of the photographic negatives made on the famous Grand Canyon expedition of J. W. Powell. This list in Major Powell's handwriting, removes all doubt as to the identification of the pictures made by J. K. Hillers and E. O. Beaman. The original negatives have long constituted an important sector of the Bureau's Indian photographic archives.

COLLECTIONS

Acc. No.

185184. Archeological materials and skeletal remains of 7 individuals from the Addicks Reservoir, on South Mayde Creek in Harris County, 16 miles west of Houston, Tex., collected 1947 by Joe Ben Wheat, River Basin Surveys.
187265. Archeological materials from 12 sites in Tenkiller Ferry Reservoir area, located on the Illinois River about 13 miles above its confluence with the Arkansas River and about 7 miles northwest of Vian, in Sequoyah and Cherokee Counties, Okla., collected by David J. Wenner, Jr., River Basin Surveys.
187266. Archeological materials surface-collected from 2 sites in the Hulah Reservoir area on Caney River about 15 miles northwest of Bartlesville, near Hulah, northeastern Osage County, Okla., collected in 1947 by David J. Wenner, Jr., River Basin Surveys.
187267. Archeological materials surface-collected from 17 sites in the Fort Gibson Reservoir area, a Corps of Engineers water-control project on the Grand (Neosho) River, beginning 7.7 miles above its mouth and including portions of Wagoner, Cherokee, and Mayes Counties, Okla., collected in 1947 by David J. Wenner, Jr., River Basin Surveys.
187539. Archeological material from Postcontact Eskimo sites on Itkillik Lake and at Anaktuvuk Pass in the Brooks Range, northwestern Alaska, collected during the summer of 1949 in the Colville Basin by Arthur Bowsher and Dr. George Llano.
187540. Archeological material, mainly stonework, from the West Fork Reservoir, Lewis County, W. Va., collected in April 1948 by Ralph Solecki, River Basin Surveys.
187541. Archeological material from Bluestone Reservoir area, on the New River, 100 miles south of Charleston, between Hinton and Narrows, W. Va.; in Giles County, Va.; Monroe and Summers Counties, W. Va., collected March-May 1948 by Ralph S. Solecki, River Basin Surveys.

Acc. No.

187542. Archeological materials from a mound at Natrium, Marshall County, W. Va., collected by Ralph S. Solecki during December 1948 and January 1949.
187742. Approximately 80 fossil mammals from the Boysen Reservoir area of Wyoming, the Canyon Ferry Reservoir area of Montana, and the Garrison Reservoir area of North Dakota, collected by Dr. T. E. White, River Basin Surveys.
188194. (Through Dr. F. H. H. Roberts, Jr.) 4 specimens, including Creodont skull from the Paleocene of North Dakota, Plesiosaur skull, fish and a marine turtle from the Pierre Cretaceous, collected by Dr. T. E. White at the Fort Randall Reservoir area in South Dakota, River Basin Surveys.
188807. (Through Dr. Paul L. Cooper) 4 fresh-water mussels from Hitchcock County, Nebr., River Basin Surveys.
189103. Archeological material, mostly potsherds, from Utivé, Panamá, collected by Dr. Matthew W. Stirling.
189439. Archeological materials from Round Bottom site on the Travis farm about 3½ miles south of Moundsville, Marshall County, W. Va., collected, with the exception of 3 celts presented by Mr. Travis, by Ralph S. Solecki during December 1948 and January 1949.
191092. 23 lizards, 6 snakes, 13 frogs, 10 marine invertebrates, and insect specimens from Panamá, collected by Dr. Matthew W. Stirling and party during the 1951 Smithsonian Institution-National Geographic Society Expedition.
188344. (Through Dr. Henry B. Collins, Jr.) Approximately 250 spiders, 27 springtails, and 1 parasitic wasp from Cornwallis Island, Canadian Arctic, collected by Dr. Collins in summer of 1950 on National Museum of Canada-Smithsonian Institution Expedition.

MISCELLANEOUS

During the year Dr. Frances Densmore, Dr. John R. Swanton, and Dr. Antonio J. Waring, Jr., continued as collaborators of the Bureau.

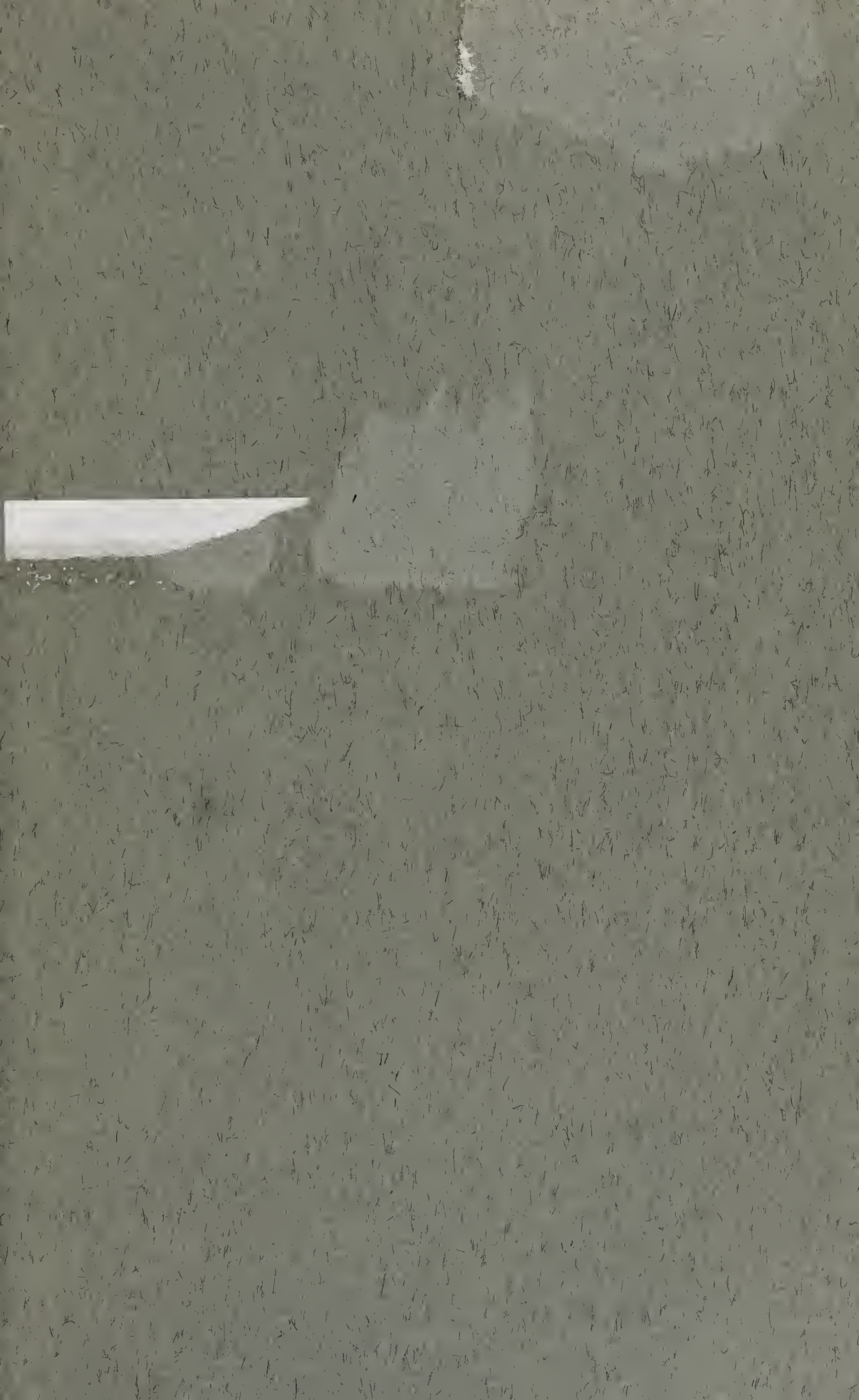
Information was furnished during the year by members of the Bureau staff in reply to numerous inquiries concerning the American Indians, past and present, of both continents. Requests from teachers of primary and secondary grades and from Scout organizations continue to increase and indicate a rapidly growing interest in the American Indians throughout the country. Various specimens sent to the Bureau were identified and data on them furnished for their owners.

Respectfully submitted.

M. W. STIRLING, *Director.*

Dr. A. WETMORE,

Secretary, Smithsonian Institution.



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